

REMARKS

By this Amendment, Applicant amends claims 1 and 9 and cancels claims 15-20, 22-24, 27, and 28 without prejudice or disclaimer of the subject matter contained therein. Thus, claims 1-3, 5, 6, 8, 9, 21, 25, and 26 are pending, with claim 3 being withdrawn from consideration. Applicants respectfully request rejoinder of claim 3 and reconsideration and prompt allowance of the pending claims at least in light of the following remarks.

Applicants gratefully acknowledge the Office Action's indication that claim 9 recites allowable subject matter. Accordingly, by this Amendment, Applicants amend claim 9 into independent form containing the subject matter of base claim 1 and intervening claim 6. Accordingly, claim 9 is allowable.

The Office Action objects to claim 1 as unclear. By this Amendment, Applicants amend claim 1 for clarity. Applicants respectfully request withdrawal of the objection.

The Office Action rejects claims 1, 2, 5, 6, 8, 21, 25 and 26 under 35 U.S.C. §103(a) over U.S. Patent 5,898,576 to Lockwood et al. (hereinafter "Lockwood") in view of U.S. Patent 5,587,887 to Price et al. (hereinafter "Price"). Applicants respectfully traverse the rejection.

In order to establish a prima facie case of obviousness, three criteria must be met (MPEP §§ 2142, 2143). 1) There must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to the skilled artisan, to modify the reference or combine reference teachings. 2) There must be a reasonable expectation of success. 3) The prior art reference (or references when combined) must teach or suggest all of the claim limitations. The first two criteria must both be found in the prior art, and not based on Applicant's disclosure.

Applicant respectfully submits that the Office Action fails to satisfy the all three of the above criteria. Applicants will first address the third criteria and then the first and second criteria below.

With respect to the third criteria, neither Lockwood nor Price disclose, teach, or suggest "a power supply region divided into two or more power supply regions by a slit," as recited in claim 1. On page 4, lines 13-14, the Office Action properly recognizes that Lockwood fails to disclose, teach, or suggest such a feature. Price does not make up for this deficiency of Lockwood.

In Figs. 2A and 2B and in column 3, line 34 - column 4, line 2, Price discloses a power supply layer divided into a plurality of voltage regions. Price simply discloses that the voltage regions are in the same given plane (C3/L34-37) and that they are electrically isolated (C3/L39-42). Price does not disclose, teach, or suggest, that the voltage regions are separated by a slit. The term "slit" is commonly defined as "a long, straight, narrow, cut or opening" (The American Heritage College Dictionary, p. 1282 (3 ed., 1997)). This definition is consistent with Applicants' disclosure, describing and showing an actual opening in the power supply layer 11 (see, e.g., Fig 1, 2, 4A-4E, 7A, and 7B and associated descriptions). Price merely discloses that the voltage regions are separate from one another within the voltage plane, not that they are separated by a cut or opening. Thus, Price fails to disclose, teach, or suggest "a power supply region divided into two or more power supply regions by a slit."

Accordingly, with respect to the third criteria, neither Lockwood nor Price disclose, teach, or suggest "a power supply region divided into two or more power supply regions by a slit," as recited in claim 1.

With respect to the first criteria, even if the power supply region of Price could be considered divided by a slit (which Applicants traverse above), there is no motivation to combine the allegedly slit power supply region of Price, or any other reference, with

Lockwood.¹ The Office Action alleges that one would be motivated to combine Lockwood and Price in order to "provide a desired voltage supply plane configuration for a printed circuit board." This reasoning is flawed.

It would not be desirable or even possible to split the power supply plane of Lockwood, with a slit or otherwise, and have the circuit board of Lockwood remain operable. Dividing the power plane 32 in Lockwood would completely defeat the stated objective of Lockwood. In order to reduce resonance of the PCB in Lockwood, a number of termination elements 48 are placed at the end of the power plane 32 (C2/L8-C3/L8). For these termination elements to work properly, they must be regularly spaced along imaginary longitudinal strips of the power plane 32 (C4/L54-C8/L18). Thus, if the power plane 32 was partially divided by a slit, as suggested by the Office Action, the imaginary longitudinal strips of the power plane 32 would be interrupted, and the termination elements would be inoperable. Thus, the object of Lockwood would be defeated.

Because, applying the alleged teaching of Price to Lockwood as suggested by the Office Action would result in an inoperable circuit board, the Office Action has failed to provide motivation to combine the allegedly slit power supply region of Price, or any other reference, with Lockwood.

Finally, with respect to the second criteria, the skilled artisan would understand from the disclosure of Lockwood, discussed above, that the power plane 32 must remain whole and uninterrupted for the termination elements to work properly. Thus, if the circuit board of Lockwood were modified to include a slit as suggested by the Office Action, the resulting

¹ This argument was presented in detail by Applicants during the September 14, 2004 personal interview and in Applicants November 11, 2004 Remarks. It has not been rendered moot in view of the new grounds of rejection and was not responded to in the Office Action as required by MPEP §707.07(f).

circuit board would be inoperable for its intended purpose. Accordingly, the skilled artisan could not have a reasonable expectation of success.

Because, the Office Action's alleged combination of Lockwood and Price fails to disclose, teach, or suggest all of the features of claim 1, fails to identify a motivation for combining the teaching of Price with the device of Lockwood, and fails to demonstrate any reasonable expectation of success, the Office Action has failed to establish a prima facie case of obviousness for claim 1. Accordingly, claim 1 is patentable over the combination of Lockwood and Price.

Further, Applicants respectfully submit that claims 2, 5, 6, 8, 21, 25, and 26 are patentable for at least the reasons that claim 1 is patentable as well as for the additional features they recite. Applicants respectfully request withdrawal of the rejection.

Furthermore, Applicants respectfully request consideration and allowance of claim 3. Claim 3 depends from allowed claim 1. Claim 3 was identified as part of the elected species in Applicants' April 25, 2005 Response to Election of Species Requirement and identified as generic in Applicants' June 21, 2002 Response to Election of Species Requirement. Claim 3 is allowable for at least the same reasons that claim 1 is allowed. Thus, in accordance with 37 C.F.R. 1.141(a), Applicants respectfully request consideration and prompt allowance of claim 3.

In view of at least the foregoing, Applicants respectfully submit that this application is in condition for allowance. Applicants earnestly solicit favorable reconsideration and prompt allowance of claims 1-3, 5, 6, 8, 9, and 15-28.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, Applicants invite the Examiner to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



James A. Oliff
Registration No. 27,075

Jesse O. Collier
Registration No. 53,839

JAO:JOC/eks

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OLIFF & BERRIDGE, PLC
P.O. Box 19928
Alexandria, Virginia 22320
Telephone: (703) 836-6400

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